



CYSTIC DEGENERATION OF THE CHORIONIC VILLI.

HAVING lately had a very interesting case of a rare disease of pregnancy, cystic degeneration of the chorionic villi, we thought a brief account of it might prove interesting to the members of our profession. A short sketch of this disease, which has been described under various names, such as uterine hydatids, cystic degeneration of the ovum, hydatiform mole, vesicular mole, etc., will aid in a clearer understanding of the case in question.

The chorion is the outermost of the fetal membranes, and is formed from the external layer of the non-germinal epiblast. Its inner surface is smooth and glossy, while its external layer, fronting the maternal decidua, is of a shaggy appearance, due to the presence of the villi. These villi are at first absolutely non-vascular, and while in this primitive condition the ovum is nourished by endosmotic absorption from the mucous membrane of the uterus. Some twelve days after conception, when the blastodermic membrane is formed, the true chorion appears. Soon the allantois reaches the inner surface of the chorion, and each villus receives a separate artery and vein. About the third month they project into the maternal tissues, and abstract oxygen, nutriment, etc., from the decidua, and tend to keep the ovum in the upper part of the uterus. Hypertrophy of one part takes place to form the placenta, elsewhere the villi undergo atrophy.

In the formation of cysts the epithelium of the villi is first affected. The connective tissue undergoes a remarkable proliferation and collects at particular spots, the rest of the villus remaining unchanged. By the growth of these elements each villus becomes distended, and many of the cells liquefy. The fluid thus produced separates the connective tissue and forms a net-work in the interior of the villus. In this way are formed the peculiar grape-like bodies which characterize the disease.

When once the degeneration has commenced, the diseased tissue increases remarkably fast. The altered chorion maintains its nutrition by its connection with the decidua.

Sometimes the mass adheres so intimately to the uterine wall that their separation is a difficult matter; or the villi may force themselves into the substance of the uterus, and thus produce thinning of the walls of this organ. A whole villus is often almost completely transformed into a bunch of vesicles as large as gooseberries. Upon the larger of these smaller ones are often inserted, and generally by a very

fine pedicle, a portion of the undilated branch of the chorion. Sometimes, when the alteration affects but a small number of the villi, the fetus may be fully developed, but this is a very rare occurrence. Should the change be more recent or less complete, the fetus would present various grades of development.

It is a much-disputed question as to whether the child or the mother plays the more important part in the production of this cystic disease. Some suppose it to follow the death of the fetus. Then the entire developmental power is expended on the chorion, which retains its attachment to the decidua, the result being abnormal growth and cystic degeneration. Graily Hewitt and Greise hold this opinion, and their view is strengthened by the fact that in almost all cases the fetus has entirely disappeared; and the occasional occurrence of twin conceptions in which one chorion has degenerated, the other remaining healthy until term. Others, among them Virchow, claim a maternal origin, or to a blood dyscrasia on the part of the mother, such as syphilis. According to this view, the death of the fetus is secondary, the consequence of impaired nutrition from the morbid state of the decidua. Both may be correct; for when the villi become dropsical, the death of the fetus necessarily ensues; and occurring at a period very near that of conception, it might undergo solution in the amniotic fluid, and thus disappear. Taking the above views of the case, it is essentially a disease of pregnancy, and so cannot occur independently of conception. Hewitt relates an interesting case in which acephalocysts were expelled from the uterus of a patient who ultimately recovered. A careful examination of the cysts and their contents showed their true nature, as the echinococci heads with their characteristic hooklets were discovered on microscopical examination. Cases have also occurred where entozoa have formed in the uterus, and have been expelled per vaginam, which were at first mistaken for true cystic disease. Hewitt relates one case in which true hydatids, originally formed in the liver, had extended to the peritoneum, and were about to burst per vaginam at the time of death. This occurred in an unmarried woman.

Another interesting question, which may at times become of the greatest practical importance, is how long the vesicles can remain in the uterus, and the possibility of a fresh growth from a few retained cysts. In this regard McClintock says: "Hydatids may be retained *in utero* for months and even years; or a portion may be expelled and the residue throw out a fresh crop of vesicles to be discharged at a future occasion." Barton Cooke Hirst gives the frequency of this disease as 1 in 2000, and its mortality over 13 per cent., and gives as the causes of death hemorrhage, sepsis, and perforation of the uterus.

J. G., age 24 years; married seven years. She gives a history of two normal easy confinements, both children being healthy and well

developed. She came to this country from Russia about four months ago, in splendid health and weighing 195 pounds. When here about two months her menstruation ceased, and she supposed herself pregnant. In about one month from the cessation of menstruation she began to be troubled with almost constant vomiting, food being ejected as soon as taken. So grave was this that her weight had been reduced to nearly 100 pounds. Coincident with this obstinate hyperemesis was hemorrhage from the womb, which was almost continuous, with frequent and alarming exacerbations. She was rapidly losing flesh and strength, and becoming very anemic. Her family history was negative, or rather very good; as her mother had borne, according to the patient's story, twenty children in the same number of years,—some of her labors being productive of twins. She has two married sisters who have given birth to healthy children. No symptoms indicative of any specific disease on her part or her husband's could be elicited.

When we were called in to see her it was four weeks and three days since her hemorrhage and vomiting had commenced. She was quite emaciated and her appearance denoted the loss of a very large amount of blood.

For three weeks previous she had been attended by a local doctor and a midwife, but treatment produced no amelioration of her distressing symptoms. They evidently did not recognize the true nature of the disease, for, as the patient herself said, they told her every day "that she would be all right to-morrow." A "to-morrow" that was four weeks in coming.

The first thing we did was to endeavor to control the vomiting, and this was speedily and successfully accomplished by a few doses of cerium oxalate. And then to discover, if possible, the true cause of her dangerous condition. Upon examination the following conditions were found to exist: Great prominence of the abdomen and uterus. In fact, the womb was as large as one would expect to find it at the seventh month. A very marked sense of fluctuation made us at first suppose it might be a collection of fluid of ovarian origin. But closer examination proved that it was an accumulation of fluid in the uterus itself. The contour of the womb, felt through the abdominal wall, was found to be more irregular than would naturally be expected. No solidity could be discerned at any point of the abdomen.

Examination with the finger per vaginam found the uterus soft, and the os dilated to the size of a quarter. Ballottement could not be obtained. As yet no cysts had been passed, but the hemorrhage was considerable. The absence of cysts rendered a positive diagnosis impossible. But as the more prominent symptoms—great increase in the size of the uterus, considerable hemorrhage, and aggravated reflex vomiting—pointed to cystic disease, and as the patient's pains were

constantly increasing, we decided to interfere and clean out the womb.

Ergot was administered, and an effort made to clean out the uterus by the hand. It was not deemed necessary to etherize the patient. In the mouth of the womb could be felt a soft spongy body presenting to the finger all the characteristics of placenta. An attempt to remove this was followed by a sudden and considerable gush of blood, a few clots and small pieces of placenta. No further attempt was made to clear the uterus beyond removing masses of cysts, which would become obstructed in the mouth of the womb. The pains continued strong and intermittent, and with each one as the uterus contracted large quantities of cysts were passed. But there was no more hemorrhage, as the flow had entirely ceased as soon as the cysts commenced to be expelled. This intermittent passage was kept up for two hours, small doses of ergot being administered whenever the pains were disposed to lag. The total quantity of cysts passed was enormous, measuring four quarts. They varied in size from a pea to a walnut, but none were as large as a hen's egg, as reported by some writers. They resembled bunches of grapes, only each one had not a separate pedicle. Some grew from other vesicles, while a few did have distinct pedicles. The majority of the cysts were not entirely full, and contained a colorless transparent fluid resembling the liquor amnii.

The after-treatment consisted in antiseptic douches, rest, and tonics. The patient did well and is now rapidly regaining her lost flesh and strength.

In this case the main symptoms were unusually severe reflex vomiting, continual and at times alarming hemorrhage, and a too rapid increase in the size of the uterus.

Cases are recorded, and among them one by Dr. Louvert-Lamane, in which the uterus was actually decreased in size. In these cases the amount of cysts must have been very small.

In case it should be necessary to introduce the hand into the uterus to dislodge the cysts, too energetic attempts at separation should be avoided, on account of the occasional firm adhesion of the cystic mass to the uterus, and the thinning of the uterine wall.

M. Pajot relates three cases, in only one of which a positive diagnosis could be made. In this case a gum-elastic catheter was introduced through the internal orifice and ergot administered. This treatment was followed by the expulsion of a large quantity of cysts, but the patient progressively lost strength, and died a few days after the operation.

Cases are related where this disease happened a second time in the same person; but rarely does it appear to have any effect on the general health of the patient or upon subsequent pregnancies.

